

The Bridge Pattern



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Overview



Work out an example

- Online courseware provider

Review the problems found

How the Bridge pattern can help

Refactoring the example using Bridge

Recap how Bridge solved the problems

Also known as Handle or Body pattern



Demo



Online courseware provider

- Annual and monthly subscribers
- Student and corporate discounts

Abstract base class and inheritance



Demo



Supporting discounts



Problems found



Exponential class growth



Duplicated code \neq DRY



Maintenance headaches

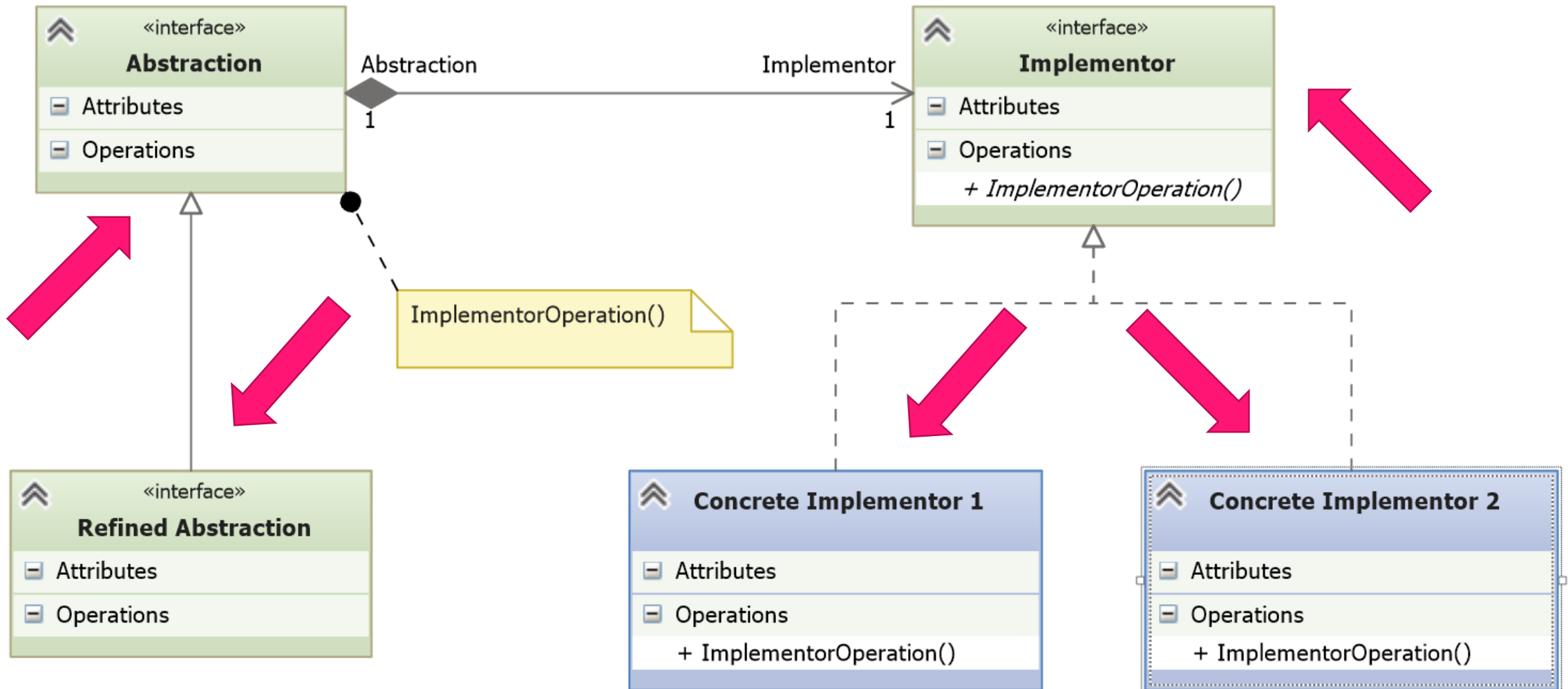


Bridge

Decouple an abstraction from its implementation so that the two can vary independently.



Bridge Pattern Structure



Demo



Implementing the Bridge pattern





Special Offers

New requirement:

**Support special offers extending
subscription periods**

Demo



Supporting special offers

- Double the subscription period



Summary



Problem of exponential class growth

Bridge pattern can control growth

- Composition

Classic implementation

Extensible by adding “spans”

Other approaches

- Prototype
- Builder
- Abstract Factory